



## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
60/224,150	08/10/2000		75		6		

Technical Marketing Associates Inc  
206 West 140th Street  
Los Angeles, CA 90061



## FILING RECEIPT



\*OC000000005514651\*

Date Mailed: 10/30/2000

Receipt is acknowledged of this provisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Hiroshi Niwa, Los Angeles, CA ;

## Continuing Data as Claimed by Applicant

## Foreign Applications

If Required, Foreign Filing License Granted 10/28/2000

\*\* SMALL ENTITY \*\*

## Title

Concept, method, and apparatus for application of aloe vera to textile fibers and yarns

## Preliminary Class

Data entry by : SNEED, LISA

Team : OIPE

Date: 10/30/2000

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

COPY OF PAPERS  
ORIGINALLY FILED

**LICENSE FOR FOREIGN FILING UNDER**  
**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**BEST AVAILABLE COPY**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 36 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15 (b).

**PLEASE NOTE the following information about the Filing Receipt:**

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents  
Office of Initial Patent Examination  
Customer Service Center  
Washington, DC 20231



Please type a plus sign (+) inside this box → ☒

Approved for use through 01/31/2001. OMB 0651-0037  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

INVENTOR(S)					
Given Name (first and middle [if any])		Family Name or Surname		Residence (City and either State or Foreign Country)	
Hiroshi		Niwa		Los Angeles, CA	
<input type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
CORRESPONDENCE ADDRESS					
Direct all correspondence to:					
<input type="checkbox"/> Customer Number		<input type="text"/>		Place Customer Number Bar Code Label here	
OR					
<input checked="" type="checkbox"/> Firm or Individual Name		Technical Marketing Associates, Inc.			
Address		206 West 140th Street			
Address					
City		Los Angeles	CA State	(310)	ZIP 90061
Country		USA	Telephone	323-1981	Fax 516-8168
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages <input type="text"/>		<input checked="" type="checkbox"/> Small Entity Statement			
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets <input type="text"/>		<input type="checkbox"/> Other (specify) <input type="text"/>			
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees					FILING FEE AMOUNT (\$)
<input type="checkbox"/> The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: <input type="text"/>					\$75.00
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

COPY OF PAPERS  
ORIGINAL FILED

RECEIVED  
SEP 09 2002  
FAC 1700

Respectfully submitted,

SIGNATURE Hiroshi Niwa

Date 8/10/00

TYPED or PRINTED NAME Hiroshi Niwa

REGISTRATION NO.

TELEPHONE (310) 323-1981

Docket Number:

## USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C., 20231.



**STATEMENT CLAIMING SMALL ENTITY STATUS**  
**(37 CFR 1.9(f) & 1.27(c))—SMALL BUSINESS CONCERN**

Docket Number (Optional)

Applicant, Patentee, or Identifier: Technical Marketing Associates, Inc.  
Application or Patent No.: \_\_\_\_\_  
Filed or Issued: \_\_\_\_\_  
Title: \_\_\_\_\_

I hereby state that I am

- ☐ the owner of the small business concern identified below.  
☒ an official of the small business concern empowered to act on behalf of the concern identified below.

NAME OF SMALL BUSINESS CONCERN Technical Marketing Associates, Inc.

ADDRESS OF SMALL BUSINESS CONCERN 206 West 140th Street  
Los Angeles, CA 90061

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office. Questions related to size standards for a small business concern may be directed to: Small Business Administration, Size Standards Staff, 409 Third Street, SW, Washington, DC 20416.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- ☐ the specification filed herewith with title as listed above.  
☒ the application identified above.  
☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization having any rights in the invention is listed below:

- ☐ no such person, concern, or organization exists.  
☒ each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING Hiroshi Niwa

TITLE OF PERSON IF OTHER THAN OWNER President

90061

ADDRESS OF PERSON SIGNING 206 West 140th Street, Los Angeles, CA

SIGNATURE Hiroshi Niwa

DATE 8-10-000

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner, Washington, DC 20231.

COPY OF PAPERS  
ORIGINALLY FILED

RECEIVED

SEP 09 2002

TC 1700

# **Concept, Method, and Apparatus for Application of Aloe Vera to Textile Fibers and Yarns**

## **Applicant**

Technical Marketing Associates, Inc.

## **Background/Summary**

The application of aloe vera solution to textile fibers and yarns is heretofore a singularly new concept to apply said solution to textile fibers and yarns. The benefits and advantages that accrue to applying the said solution to textile fibers and yarns in the apparatuses developed and yarns in particular are manifested in a softer and smoother finished yarn with the benefits of having aloe vera solution in the textile yarns.

It is the objective of the invention of the apparatuses developed and designed to apply aloe vera solution to textile yarns in a method that is continuous and uniformly applied in a quick, compact yarn treatment system in the most efficient manner.

It is another objective that the choice of where to develop apparatuses in order to apply the aloe vera solution was critically determined by the most efficacious points to uniformly apply the said solution in the most effective locations in the production line.

It was another objective that the textile fibers and yarns be treated in the most linear path in order that the application of the aloe vera solution be delivered in most uniform method, resulting in a smoother yarn.

## **Drawings/Descriptions**

Figure 1 shows the fiber stretch break machine in its entirety. The first apparatus is mounted on the portion marked "A" in figure 1. Figure 2 shows the aloe reservoir tank and aloe pump connected to the apparatus on the stretch break machine. Figure 3 shows the tube containing the aloe vera solution connected and mounted above the two rollers. The first apparatus is located immediately after the continuous filament fiber has been stretch broken into smaller, discrete fiber lengths. The two rollers arranged top and bottom are running continuously to pull the fiber into a storage can. Before the fiber is put into the storage can, the top roller is applying the aloe vera solution to the fiber in the following method- a reservoir filled with the aloe vera solution is maintained next to the fiber stretch breaking machine, a tube connects the reservoir to an electrically operated pump that runs in a continuous mode. The pump can be set to run at varying speeds. The pump's tube is then situated above the top roller, where the aloe vera solution is metered onto the roller, and the fiber passing through the roller will be impregnated with the aloe vera solution. This initial application of the said solution is the first pass that imparts the textile fibers with a softening effect on the fibers. The precise metering of the solution is critical since a) inconsistent application of said solution will lead to inconsistent quality fiber, b) over-application or under-application of said solution will lead to significant

impairment of the fiber-into-yarn (i.e., spinning) process. The application of the aloe vera solution in a continuous method is critical to the consistent quality of the spinning process.

Figure 4-A shows the continuous steam bulker in its entirety. Figure 4-B has a close-up of the second apparatus mounted atop the continuous steam bulker. Figure 5-A again has the continuous steam bulker in its side view, with Figure 5-B with a  $\frac{3}{4}$  view of where the second apparatus is attached to the bulker. The apparatus, which is comprised of a metal tank, measuring 42 inches long, 6 inches wide, and 5 inches deep, is placed on the feeding rack at the end of the bulking machine. The metal cylindrical roller, is placed into this tank so that its round surface will come into contact with the textile yarns. The metal cylindrical roller is connected via a series of chains and cams/gears to an electric motor which drives the roller to varying speeds, depending on the type of textile yarn that is being run through the continuous steam bulker. The tank is filled with the aloe vera solution; as the metal cylindrical roller revolves in the tank, its leading round surface is constantly being replenished with a consistent and uniform amount of aloe vera solution. Figure 6-A shows the side view of the aloe vera feeder bottle that sits atop the metal tank; it feeds the metal tank with gravity feed method. Figure 6-B shows how the motor is connected to the metal cylindrical roller and drives the various cams/gears that determines the rate of revolutions per minute for the metal cylindrical roller.

The objective of our placement and method of application immediately after the continuous bulking machine results in the most uniformly consistent application of aloe vera solution, and the application of said solution in a linear fashion to textile yarns. The aloe vera solution is contained in a reservoir after the textile yarn has exited the continuous bulking machine. A roller that runs the width of the bulking machine is set up with variable gearing that is connected to the shaft which runs the continuous steamer. Each textile yarn, depending on the characteristics it possesses, will determine the gearing that is used on the apparatus that delivers aloe vera solution onto the textile yarn. After application of the aloe vera solution in a continuous method, the yarn will have consistent and uniform application and thus will be treated in the optimal method. This concept of applying aloe vera solution to textile yarns, the method, and apparatuses invented is the first in textile applications. The benefits that accrue to using such a method are numerous, with improved texture, softness, and feeling of textile products, in both semi-finished and finished forms.